

# Notice of Allowability

Application No.

10/722,441

Examiner

James D. Stein

Applicant(s)

KONDO, TAKAYUKI

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 6/30/05.
2. ☒ The allowed claim(s) is/are 1 and 3-15.
3. ☒ The drawings filed on 8 November 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

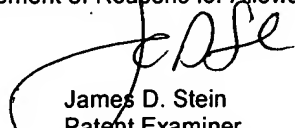
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
John D. Lee  
Primary Examiner

  
James D. Stein  
Patent Examiner  
AU 2874

### **DETAILED ACTION**

This Office Action is in response to the amendment filed on 6/30/05, which has been fully considered and entered into the prosecution record. Claims 1, 3, 4 and 6 have been amended, claim 2 has been cancelled, and new claim 15 has been added. Claims 1 and 3-15 are pending in the application.

#### ***Allowable Subject Matter***

Claims 1 and 3-15 are allowed.

The following is an examiner's statement of reasons for allowance: None of the cited prior art discloses or suggests An optical interconnection circuit among wavelength multiplexing chips comprising: a substrate, a micro-tile shaped elements disposed on the substrate having a light emitting function or a light receiving function with wavelength selectivity; and optical waveguides disposed on the substrate and optically connected to the micro-tile shaped elements.

The Nishimura reference cited in the previous Office Action does not teach the waveguides to be disposed on the substrate, as claimed by applicant; and the micro tiles do not have wavelength selectivity. Another relevant reference, [USPUB 2004/0013358] to Zhang discloses in figs. 5A-C what may be considered a "tile" 510 disposed on a substrate with a light receiving function. However, the waveguide is located above the substrate. Furthermore, there is no teaching in the reference that suggests that the "tile" element has a wavelength selectivity function. The Yoshimura reference cited in the previous Office Action discloses waveguides in a substrate coupled to what could be considered "micro-tiles (28a-28d)", but there is no teaching of the micro-tiles having wavelength selectivity. These prior art references do not disclose the "micro-tiles" to be extremely miniaturized and having areas of several hundred square

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micrometers or less and a thickness of several tens of micrometers, allowing multiplexing transmission devices to be fabricated from *one* optical waveguide and a plurality of micro-tile elements, as taught by applicant [¶0010 and ¶0020]. Therefore, the prior art devices are incapable of providing simple and extremely compact wavelength division multiplexing transmission devices, which is the thrust of applicant's invention. For these reasons, the claimed invention is allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

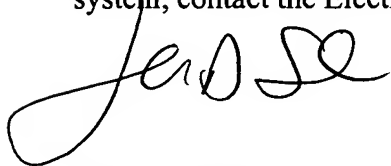
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

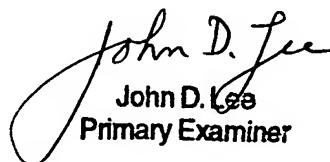
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "James D. Stein". The signature is fluid and cursive, with a large loop at the end.

James D. Stein

A handwritten signature in black ink, appearing to read "John D. Lee". The signature is fluid and cursive, with a large loop at the end.  
John D. Lee  
Primary Examiner